

Application No. 10/708,394
Amendment dated March 1, 2006
Reply to Office Action of December 1, 2005

Docket No.: 22040-00030-US

REMARKS

Claims 1-14 remain pending in this application. Claims 1, 7, 12, and 14 are independent. Claims 1, 7, 12, and 14 have been amended, and no claims have been added or canceled by this Amendment.

Continued Prosecution Application

Applicant notes that this application is not a CPA. CPA's have not been used for some time except for Design applications. An RCE was filed on 9/15/2005, to which the present office action has issued in response.

Claim Objections

Withdrawal of the objection to claims 7 and 14 is requested. The Examiner objects to the use of the indefinite article "an" in the preamble, i.e., "An FIR filter device...."

Applicants submit that the use of "an" is proper English grammar in this context. As shown in the attached "Essentials of English"¹ excerpt, it is the sound, not the actual letter, which determines the form of the indefinite article. Thus, use of "an" in the preamble is correct in this instance.

Accordingly, withdrawal of the objection to these claims is requested.

Unpatentability Rejection over Myers in view of Wilkinson

Withdrawal of the rejection of claims 1, 4-7, and 10-14 under 35 U.S.C. §103(a) as being unpatentable over Myers (US 4,817,149) in view of Wilkinson (JP 06-326555) is requested.

At the outset, Applicant notes that, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the

¹ Essentials of English, Hopper et al., Barron's Educational Series, Inc., New York, 1973, pp. 28-29.

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references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, *the prior art reference must teach or suggest all the claim limitations*.² Further, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure.³

An essential evidentiary component of an obviousness rejection is a teaching or suggestion or motivation to combine the prior art references.⁴ Combining prior art references without evidence of a suggestion, teaching or motivation simply takes the inventors' disclosure as a blueprint for piecing together the prior art to defeat patentability – the essence of hindsight.⁵

“There are three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art.”⁶ Further with regard to the level of skill of practitioners in the art, there is nothing in the statutes or the case law which makes “that which is within the capabilities of one skilled in the art” synonymous with obviousness.⁷ The level of skill in the art cannot be relied upon to provide the suggestion to combine references.⁸

Myers at least does not teach or suggest simultaneous use of first and second FIR filters provided at an output. While Wilkinson may or may not teach or suggest that a sum of every other term is as recited in applicant's independent claims 1, 7, 12, and 14 as alleged by the Examiner, Wilkinson does not make up for the deficiencies of Myers with respect to providing a teaching or suggestion of the simultaneous use of first and second FIR filters as recited in the

² See MPEP §2143 (emphasis added).

³ *In re Vaack*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991) and See MPEP §2143.

⁴ *C.R. Bard, Inc. v. M3 Systems, Inc.*, 48 USPQ2d 1225 (Fed. Cir. 1998)

⁵ *Interconnect Planning Corp. v. Feil*, 227 USPQ 543 (Fed. Cir. 1985)

⁶ See MPEP §2143.01, citing *In re Rouffet*, 149 F.3d, 1350, 1357, 47 USPQ2d 1453, 1457-8 (Fed. Cir. 1998).

⁷ *Ex parte Gerlach and Woerner*, 212 USPQ 471 (PTO Bd. App. 1980).

⁸ See MPEP §2143.01, citing *Al-Site Corp. v. VSI Int'l Inc.*, 50 USPQ2d 1161 (Fed. Cir. 1999).

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pending claims. Clearly, Myers does not teach or suggest *an FIR filter designing method*, as in independent claim 14.

Specifically, the applied art, taken alone or in combination, does not teach or suggest a sound quality adjusting device which includes, among other features, "...a first FIR filter...a second FIR filter...and an output coupled to and simultaneously receiving both a first output of the first FIR filter and a second output of the second FIR filter", as recited in independent claim 1, as amended.

Further, the applied art, taken alone or in combination, does not teach or suggest an FIR filter device that includes, among other features, "...a first FIR filter...a second FIR filter...; and an output coupled to and *simultaneously* receiving both a first output of the first FIR filter and a second output of the second FIR filter", as recited in independent claim 7, as amended.

Still further, the applied art, taken alone or in combination, does not teach or suggest a sound quality adjusting method that includes, among other features, "...a first filtering step, implemented by a first FIR filter...a second filtering step, implemented by a second FIR filter...a gain controlling step of *simultaneously* controlling a gain of a sound signal having passed through the first FIR filter and a gain of a sound signal having passed through the second FIR filter; and a summing step of summing the sound signals having undergone *simultaneous* gain control in the gain controlling step and outputting a sum", as recited in independent claim 12, as amended.

Finally, the applied art, taken alone or in combination, does not teach or suggest *an FIR filter designing method* for designing FIR digital filters which includes, among other features, "setting frequency characteristics to be complementary to each other and allowing a total gain of the FIR digital filters to serve as a reference value at all frequencies...changing the sequence of the first filter coefficients and determining second filter coefficients having a second symmetrical sequence in which a sum of the second filter coefficients is zero and a sum of every other coefficient in the second symmetrical sequence is equal to a sum of the other every other

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coefficient having an opposite sign, wherein the first filter coefficients and the second filter coefficients are used, respectively, as the filter factors of first and second FIR digital filters whose outputs are simultaneously summed together", as recited in independent claim 14, as amended.

Myers is directed to a three dimensional auditory display which artificially imparts localization cues to a multifrequency component electronic signal which corresponds to a sound source. The cues imparted are a front to back cue in the form of attenuation and boosting of certain frequency components of the signal, an elevational cue in the form of severe attenuation of a selected frequency component, i.e., variable notch filtering, an azimuth cue by means of splitting the signal into two signals and delaying one of them by a selected amount, among other features.

The portion of Myers cited by the Examiner in the rejection of claim 14 is completely silent on a filter designing method.

Figures 8-12 are offered as teaching "setting frequency characteristics", but instead teach front-back cueing (FIGS. 8-9), and elevation cueing (FIGS. 10-12). The Examiner offers FIGS. 1 and 20 and col. 6, lines 23-col. 7, line 48 as disclosing "allowing a total gain of the FIR digital filters to serve as a reference value at all frequencies", but instead these portions of Myers merely teach in FIG. 20 the early reflection channel of FIG. 1, which has nothing to do with using a total gain of the FIR digital filters to serve as a reference value at all frequencies, as claimed.

Accordingly, since the applied art does not teach or suggest all the claimed limitations, consideration and allowance of claims 1-14 are respectfully requested.

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Unpatentability Rejection over Myers and Wilkinson in view of Kovtun

Withdrawal of the rejection of claims 2-3 and 8-9 under 35 U.S.C. §103(a) as being unpatentable over Myers (US 4,817,149) and Wilkinson (JP 06-326555) in view of Kovtun (US 6,512,944) is requested.

Whether or not Kovtun stands for that which it is offered by the Examiner, Kovtun does not make up for the deficiencies of Myers and Wilkinson with respect to providing a teaching or suggestion of the simultaneous use of first and second FIR filters, as recited in the pending independent claims 1 and 7, as discussed above.

Accordingly, since the applied art does not teach or suggest all the claimed limitations, withdrawal of the rejection and allowance of claims 2-3 and 8-9 are respectfully requested.

Unpatentability Rejection over Myers and Wilkinson in view of Honma

Withdrawal of the rejection of claims 2-3 and 8-9 under 35 U.S.C. §103(a) as being unpatentable over Myers (US 4,817,149) and Wilkinson (JP 06-326555) in view of Honma (US 5,557,646) is requested.

Whether or not Honma stands for that which it is offered by the Examiner, Honma does not make up for the deficiencies of Myers and Wilkinson with respect to providing a teaching or suggestion of the simultaneous use of first and second FIR filters, as recited in the pending independent claims 1 and 7, as discussed above.

Accordingly, since the applied art does not teach or suggest all the claimed limitations, withdrawal of the rejection and allowance of claims 2-3 and 8-9 are respectfully requested.

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Conclusion

In view of the above amendment and remarks, Applicants believe that each of pending claims 1-14 in this application is in immediate condition for allowance. An early indication of the same would be appreciated.

In the event the Examiner believes an interview might serve to advance the prosecution of this application in any way, the undersigned attorney is available at the telephone number indicated below.

Although no fees are believed to be due with this response, for any fees that are due, including fees for extensions of time, the Director is hereby authorized to charge any fees or credit any overpayment during the pendency of this application to CBLH Deposit Account No. 22-0185, under Order No. 22040-00030-US from which the undersigned is authorized to draw.

Respectfully submitted,

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BARRON'S EDUCATIONAL SERIES, INC.
WOODBURY, NEW YORK

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All inquiries should be addressed to:

Barron's Educational Series, Inc.
113 Crossways Park Drive
Woodbury, New York 11797

Library of Congress Catalog Card No. 67-20430
International Standard Book No. 0-8120-0059-5

PRINTED IN THE UNITED STATES OF AMERICA

3 4 5 6 7 8 9 10 11 M 7 6 5 4

28 THE WORD

Because he was a jolly, green giant, he was green and jolly. [*Green* and *jolly* are adjectives.]

(2) Adjectives and adverbs can sometimes be distinguished by form. Some of the several forms are listed below, including the most important one, which is that most adverbs are adjectives plus *ly*.

	ADJECTIVE	ADVERB
theory	theoretical	theoretically
differ	different	differently
honor	honorable	honorably
coward	cowardly	
hour	hourly	hourly
collect	collective	collectively
back	backward	backward
shore		ashore
crab	crablike	crabwise

Recently, adverbs ending with *wise* have become popular, almost too popular because the reader may not be prepared for a particular noun's becoming an adverb. The following sentence should be avoided at present. *The Fortyniners did a remarkable job, special-teamwise.*

4B The Article

The most used adjectives are the articles, *a*, *an*, and *the*. *A* and *an* are called indefinite articles because they single out any one unspecified member of a class. *The* is called a definite article because it specifies a particular member or a particular group of members of a class.

A is used when it immediately precedes a word beginning with a consonant sound: *a book, a tree*. *An* is used when it immediately precedes a word beginning with a vowel sound: *an apple, an ancient city*.

NOTE: It is the sound, not the actual letter, which determines the form of the indefinite article: *a university, an R.C.A. tele-*

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vision set, an 8-sided object. In some instances when there are different pronunciations of the same word, the pronunciation used by the speaker or writer determines the form of the article. If the writer pronounces the word *humble* omitting the aspirant or h-sound, he should write *an humble person*. If he similarly omits the aspirant in *historical*, he should write *an historical novel*.

4C Functions of Adjectives and Adverbs

While adjectives and adverbs can perform the same functions (verb complements and noun modifiers), their functions are usually quite distinct.

Adjectives modify a noun or function as the complements of copulative verbs such as be, seem, feel.

The *old* man, *tired* and *sultry*, waited for the return of his children. [*Old*, *tired* and *sultry* modify the noun *man*.]

I am *happy* that he feels *good*. [*Happy* and *good* are the complements of the verbs *be* and *feel*.]

4D Functions of Adverbs

Adverbs modify verbs, other modifiers, and sentences.

He spoke to her *quietly*. [modifies the verb *spoke*]

Naturally, he spoke to her. [modifies the whole sentence]

She sang *extremely well*. [modifies the adverb *well*]

4E Comparison of Adjectives and Adverbs

Adjectives and adverbs have positive, comparative, and superlative forms. The positive form is the basic word: *small, beautiful, lush, loudly*.